WHAT IS CLAIMED IS:

1   1. A system for modifying digital images, the system comprising means for

2   maintaining an association between an image portion and a list of operations used to create

3   the image portion.

1   2.   A method for processing an image in an application program, wherein

2   the application program executes in a digital system, wherein the digital system includes a

3   user input device, the method comprising

4   accepting signals from the user input device to cause one or more operations

5   to modify the image to create a modified image;

6   creating a list of at least one of the operations used to create the modified

7   image; and

8   storing the list in association with the modified image.

1   3.   The method of claim 2, further comprising

2   retrieving the modified image;

3   retrieving the list; and

4   associating the list with the modified image.

1   4.   A method for modifying a digram of connected nodes displayed on a

2   display device in a digital system, wherein the nodes are connected with elongated

3   connectors, wherein the digital system includes a user input device and a processor, the

4   method comprising

5   accepting first signals from the user input device to remove an end of a

6   connector from a first node;

7   accepting second signals from the user input device to move the end of the

8   connector in proximity to a second node;

9   using the processor to indicate that the second node has been automatically

10   selected;

11   accepting third signals from a user input device to indicate that the end of the

12   connector should be connected to the second node; and

13   using the processor to automatically connect the end of the connector to the

14   second node.

1   5.   A method for joining nodes in a diagram, wherein the diagram includes

2   a first node and a second node, the method comprising, the method comprising

3   accepting first signals from the user input device to move the first node into

4   visible contact with the second node; and

5   in response to the moving of the first node into visible contact with the second

6   node, performing the step of using the processor to create a connection between the first and

7   second nodes.

1   6.   The method of claim 5, wherein the connection is created at the

2   approximate points of contact of the first and second nodes.

1   7.   The method of claim 5, wherein a visual indicator indicates that

2   contact has occurred.

1   8.   The method of claim 5, wherein an audible indicator indicates that

2   contact has occurred.

1   9.   The method of claim 5, further comprising

2   moving the first node into proximity with the second node to within a

3   predetermined threshold distance; and

4   in response to the step of moving the first node into proximity, performing the

5   step of using the processor to create a connection between the first and second nodes.

1   10.   A method for modifying a diagram of nodes in a digital processing

2   system, wherein the diagram includes nodes coupled by connectors, wherein a node

3   represents an operation performed on an image portion, wherein a complex node represents

4   an operation that includes sub-operations, the method comprising

5   accepting signals from a user input device to expand a complex node; and

6   in response to the step of accepting signals to expand a complex node,

7   performing the step of replacing the complex node in the diagram with one or more nodes

8   corresponding to sub-operations of the operation represented by the complex node.

1   11.   The method of claim 10, wherein the operations are image processing

2   operations.

1   12.   A method for modifying parameter values, the method executing in a

2   digital system, the digital system including a user input device, the method comprising

3   accepting signals from the user input device to define a freehand line drawing;

4   and

5   using the freehand line drawing to modify at least one parameter value.

1   13.   The method of claim 12, wherein the freehand line drawing is used to

2   modify the at least one parameter value as a function of time.

1   14.   The method of claim 12, wherein the freehand line drawing is used to

2   modify the at least one parameter value as a function of space.

1   15.   A method for displaying image information on a display device

2   coupled to a processor and user input device, the method comprising

3   using the processor to display a main image on the display device;

4   generating modified images;

5   accepting signals from the user input device to select a plurality of modified

6   images; and

7   in response to the step of accepting signals, performing the step of displaying

8   the plurality of selected images on the display device adjacent to the main image.

1   16.   A method for displaying information about an image in a image

2   processing system, the image processing system including a processor coupled to a display

3   device and to a user input device, the method comprising

4   using the processor to display an image;

5   accepting signals from the user input device to select a portion of the image;

6   and

7   using the processor to display a list of operations that contributed to the

8   generation of the selected portion of the image.

1   17.   The method of claim 16, wherein the image portion is a single pixel.

1   18.   The method of claim 16, further comprising

2   accepting signals from the user input device to identify an operation in the list;

3   using the processor to regenerate the image using operations in the list other

4   than the identified operation; and

5   displaying the regenerated image on the display device.

1   19.   A method for saving a setting in a computer user interface, the method

2   executing in a digital processing system including a processor coupled to at least one user

3   input device and to a display device, the processor executing a user interface including

4   controls for changing parameter values, the method comprising

5   accepting signals from a user input device to provide a new parameter value

6   by using a first control;

7   accepting signals from a user input device to define a first label;

8   associating the label with the new parameter value and with the first control;

9   storing the label in a list of labels associated with the first control;

10   using the processor to display the list of labels;

11   accepting second signals from a user input device to select the first label; and

12   in response to the step of accepting second signals, performing the step of

13   using the new parameter value.

1   20. A method for using a three-dimensional look-up table in a digital storage

2   device to obtain a result, the method comprising

3   selecting a first resolution;

4   using the first resolution to define subcubes in a mapping space,

5   wherein the subcubes have dimensions based on the first resolution;

6   assigning a single output value to each subcube;

7   generating a look-up table in accordance with the subcubes;

8   receiving a first set of three values;

9   using the mapping space to map the first set of three values to a point

10   in the mapping space, wherein if the point is within a given subcube then the result is the

11   assigned output value of the given subcube; and

12   regenerating the look-up table at a different resolution.

1   21. The method of claim 20, wherein the mapping space is multi-dimensional

2   with a number of dimensions greater than 3.

1   22. The method of claim 20, wherein the mapping space is non-rectangular.

1   23. The method of claim 20, wherein multiple subcube resolutions are used

2   for a single mapping space.